

Work Order ID 72501

Wednesday, July 27, 2011 9:11:49 AM



U/R

Page 1

Item ID: D350-748-101

Accept



Setup Start



Revision ID:

Item Name: Crosstube Installation, High Fwd

Stop



Start Date: 7/27/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: *H*

Date: *11-07-27* Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D350-748-141

F

U/R

100



DC

Document Control

DOCUMENT CONTROL

Memo

Photocopy bluefile & type labels per D350-748-101

CNC 002

SCRAP

110



CNC Bend 1

CNC Delta 100 Bender

BENDING MACHINE - CROSSTUBES

Memo

Bend tube as per Dwg D350-748-141 using CNC bender program D350F and Folio FT

120



QC

Quality Control

QC15- Crosstube Dimensional Check

Memo

Sulley

11-8-27

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR) 01,						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Required Date: 8/16/2011 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

125

0.00



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

Stress relief

Heat treat crosstube as per QSI010 4.3

Temp: 375

Start time: 4h30

Finish time: 8h30

SAD 11-08-05

127

0.00



QC

QC6- Inspect dimensions to drawing

Memo

0.00

Quality Control

Sullos

FD

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Cust Item ID:

Required Date: 8/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Crosstubes	0.00							
	Crosstubes								
Crosstubes	Memo	0.00							
	1-Drill Tube as per Dwg D350-748-141 Using DT8876 A,B & C Drill Jigs, Set-up drill table as per QSI 010								
	2-Deburr								
	3-Engrave Part # and Batch # as per Dwg D350-748-141								
	4-Remove all marks from tube within limits of D350-748-141								
	5- Apply a light coat of LPS3 on the interior of tube Batch: <u>M109952</u>								
	QC5- Inspect part completeness to step on W/O	0.00							
140	QC								
	Quality Control								
	Memo	0.00							
	CHECK 10 DEG HOLES WITH DT8876E (EUROCOPTER CLAMP)								

DP
SAD
11-8-8
TW 11-08-09
SAD 11-08-10

SAD 11-08-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Cust Item ID:

Required Date: 8/16/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start




QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150  Outsource3	Outsource process-Cadplate per QSI017 4.1.9.1	0.00							
Outsource process - Cad plate	Memo Issue P/O: <u>14653</u> Stress relief at 375° for 5 hours Magnetic Particle Inspect per ASTM E1444 Cadium Plate per AMS-QQ-P-416B, Class 1, Type 2 Embrittle relief at 375° for 8 hours, Chromate Treat Possible Supplier: Southwest United Industries Ensure Certificate of Conformity is attached	0.00						<u>CZ 11/08/10</u>	<u>Ⓢ</u>
160  Packaging	Receive & Inspect for Damage & Mat'l Certs	0.00							
Packaging	Memo Ensure certificate of conformity is attached	0.00							<u>P 11/9/12</u>
170  QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo	0.00							<u>Pto →</u>

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W/O: 72501		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: 820 848-201 PAR #: Fault Category: Landing Gear / Reg. 1 NCR: Yes No DQA: ck Date: 11/09/21
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: ck Date: 11/09/21

NCR: 11-853		WORK ORDER NON-CONFORMANCE (NCR) #3056.04						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/09/12	#100	tubes arrived at CAD Plating cracks R.C. Process (this was rec'd cracked at the supplier - cracked by us.)	 11/09/12 PST 042	cracks is located about 12"-13" inches from cul. Scrap + Destroy	 11-9-13	PL, 11/09/20 PST 042	 11/09/12 PST 042	 11/09/12

NOTE: Date & initial all entries

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Start Date: 7/27/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 	SprayPaint	0.00							
SprayPaint	Memo	0.00							
Spray Painting	1-Prime inside crosstube as per QSI 005 4.2 2-Prime Outside of Tube as per Dart QSI 005 4.2								
190 	QC14- Inspect Spray Paint	0.00							
QC	Memo	0.00							
Quality Control	Then, Wrap in plastic bag to protect from scratches								
200 	Crosstubes	0.00							
Crosstubes	Memo	0.00							
Crosstubes	1-Install Ground wire Insert, then insert screw and washer 2-Install Abraison strips as per Dwg D350-748-141 & QSI 035. 3-Install supports Using Dt8876 as per Dwg D350-748-141, Torque to 60-80 IN-LBS								

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Cust Item ID:

Required Date: 8/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
220 Packaging Packaging	Pick Kit Memo	0.00 0.00							
230 QC Quality Control	QC4- 100% Inspect kits for completeness Memo	0.00 0.00							

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Item Name: Crosstube Installation, High Fwd

Start Date: 7/27/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240 	Packaging	0.00							
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D350-748-101 Location: _____ PPP Rev: _____								
250 	QC21- Final Inspection - Work Order Release	0.00							
QC Quality Control	Memo	0.00							

W 11.09.10

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries

Picklist Print

Page 1

Wednesday, July 27, 2011 9:11:55 AM

Work Order ID: 72501



Parent Item: D350-748-101



Parent Item Name: Crosstube Installation, High Fwd

Start Date: 7/27/2011

Required Date: 8/16/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A New Issue 06-07-05 JLM
 IPP Rev:B Update qty of MS21042L5 06-09-12 KJ
 IPP Rev:C Rev B 07-11-15 DD
 IPP Rev D Combined manufacturing 08.04.02 EC verified by: DD
 IPP Rev:E 08-06-24 revD as per dwg DD verified by:EC IPP Rev:F
 10.08.04 added QSI010 4.3 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D350-748-141TRN		Manufactured	No			110	Each	0.0000	1	1			
Crosstube Turning Detail													
ALS4-1032-225		Purchased	No			200	Each	931.0000	1	1			

Insert

Location	Loc Qty	Loc Code
ST282	931	
110768	62	
117717	9	
118386	860	

AN960JD10	NAS1149D0363J	Purchased	No			200	Each	0.0000	1	1			
Washer													
D2856-400		Manufactured	No			200	f	290.3845	1.181	1.243158			

Abraison Strip

Location	Loc Qty	Loc Code
ST403	73.7149	
68076	73.7149	
ST409	216.6696	
63735	0.6696	
71164	216	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR: Yes No** **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Work Order ID: 72501

Parent Item: D350-748-101

Parent Item Name: Crosstube Installation, High Fwd

Start Date: 7/27/2011

Required Date: 8/16/2011

Start Qty: 1.00

Required Qty: 1.00

D3502-1

Manufactured No

200

Each

25.0000

2

2



Support



Location

Loc Qty

Loc Code

ST063

25

61206

12

61843

3

64004

10

MS21920-20

Purchased

No

200

Each

80.0000

2

2



Clamp (per MIL-DTL-8783C)

Location

Loc Qty

Loc Code

LG050

80

116799

10

117279

28

118236

42

MS27039-1-10

Purchased

No

200

Each

155.0000

1

1



Screw

Location

Loc Qty

Loc Code

ST290

150

117441

150

ST291

5

115935

5

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Wednesday, July 27, 2011 9:11:55 AM

Work Order ID: 72501



Parent Item: D350-748-101



Parent Item Name: Crosstube Installation, High Fwd

Start Date: 7/27/2011

Required Date: 8/16/2011

Start Qty: 1.00

Required Qty: 1.00

AN4-41A Purchased No

220 Each

299.0000 8 8



Bolt

Location

Loc Qty

Loc Code

ST360

299

115108

74

115705

50

116191

50

117619

50

117795

25

118451

50

AN4-6A Purchased No

220 Each

918.0000 16 16



Bolt

Location

Loc Qty

Loc Code

ST356

718

116924

218

117872

200

118422

300

ST358

200

117514

200

AN5-32A Purchased No

220 Each

228.0000 4 4



Bolt

Location

Loc Qty

Loc Code

ST340

228

117161

2

117514

50

117688

16

117872

60

118191

50

118422

50

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Parent Item Name: Crosstube Installation, High Fwd

Start Date: 7/27/2011

Required Date: 8/16/2011

Start Qty: 1.00

Required Qty: 1.00

AN960JD416 NAS1149D0463J Purchased No 220 Each 0.0000 32 32



Washer

AN960JD516 NAS1149D0563J Purchased No 220 Each 0.0000 8 8



Washer

D3500-1 Manufactured No 220 Each 32.0000 4 4



Saddle

Location

Loc Qty

Loc Code

ST424

9

66127

9

ST424/25

20

62207

20

ST425

3

61838

3

D3501-1 Manufactured No 220 Each 321.0000 16 16



Bushing

Location

Loc Qty

Loc Code

ST063

221

61984

19

68939

102

70682

100

ST066

100

67757

100

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Parent Item: D350-748-101



Parent Item Name: Crosstube Installation, High Fwd

Start Date: 7/27/2011

Required Date: 8/16/2011

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

220

Each

5,459.000

24

24



Nut

Location

Loc Qty

Loc Code

ST300

5459

117441

1308

117601

651

117885

1500

118451

2000

MS21042L5

Purchased

No

220

Each

1,300.000

4

4



Nut

Location

Loc Qty

Loc Code

ST300

1300

116105

5

116548

111

117441

498

117591

100

117611

90

118179

496

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

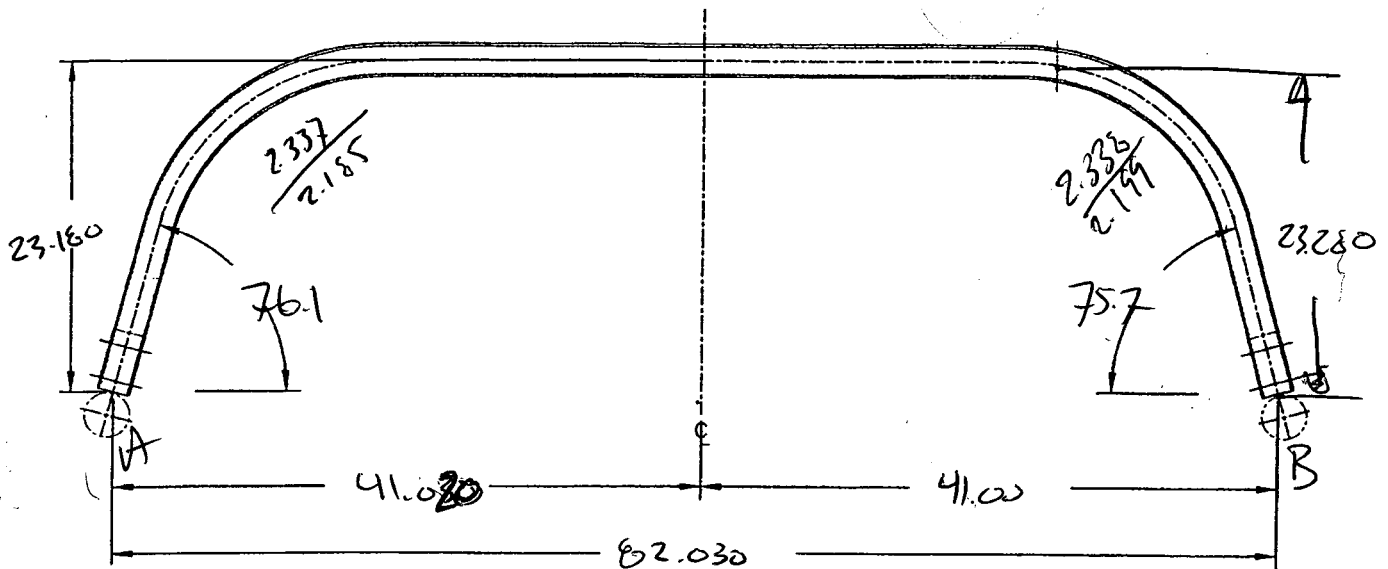
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	72501
Description: Crosstube High Fwd (AS350/355)		Part Number:	D350-748-101
Inspection Dwg: D350-748-141 Rev: E		Page 1 of 1	

Required Dimension	Min	Max
Height	23.13	23.37
1/2 Span	40.78	41.02
Angle	75	77
Total Span	81.56	82.04



Comments
twist = 0.186"
SIDE A = 3.3% crushing @ 42 passes
SIDE B = 3.7% crushing @ 37 passes

QC15 Inspection	S
Date	11/02/04

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	10.08.23	Dwg Rev updated	KJ	

11/02/04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

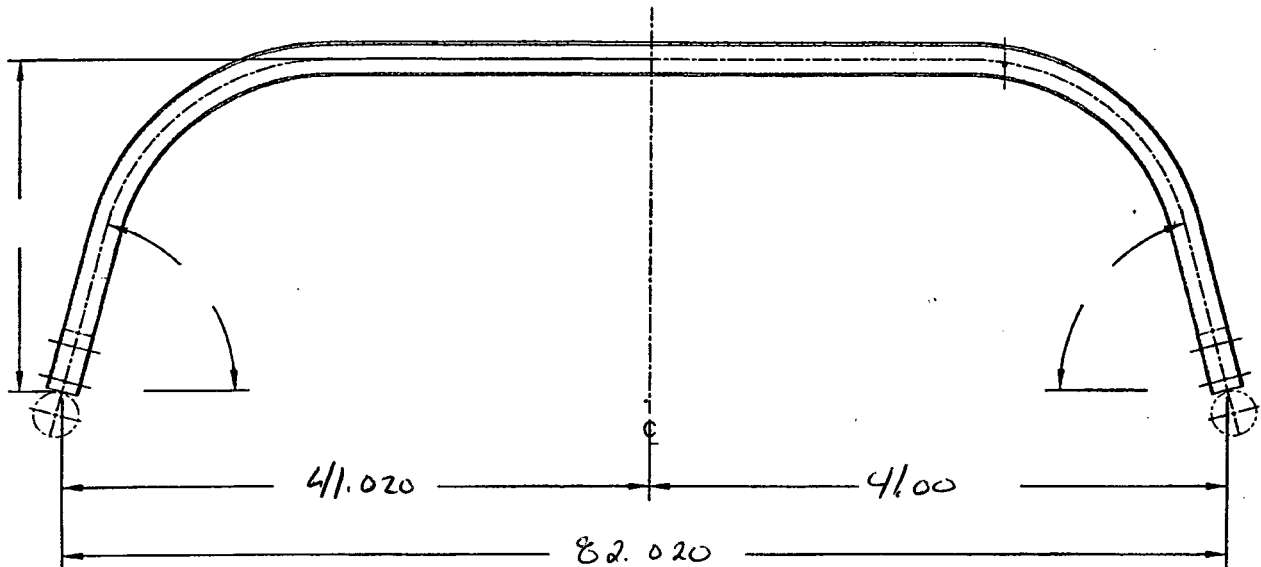
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	72501
Description: Crosstube High Fwd (AS350/355)		Part Number:	D350-748-101
Inspection Dwg: D350-748-141 Rev: E		Page 1 of 1	

After stress relief

Required Dimension	Min	Max
Height	23.13	23.37
1/2 Span	40.78	41.02
Angle	75	77
Total Span	81.56	82.04



Comments
twist = 0.285 OK of 11.08.08
DSI 042

QC15 Inspection	S
Date	11/08/08

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	10.08.23	Dwg Rev updated	KJ	

11/08/23



Item	Qty -141	Part Number	Description
1	X	D350-748-141	CROSSTUBE ASSEMBLY (AS 350/355 HI FWD)
2	1	D6015-125	CROSSTUBE (OR D6017-115)
3	2	D3502-1	SUPPORT
4	2	D2856-400-710	ABRASION STRIP
5	1	AELS-1032-225	INSERT
6	1	NAS1149D0363J	WASHER (OR AN960JD10)
7	2	MS21920-20	CLAMP (PER DART SPEC. M-MS21920-20)
8	1	MS27039-1-10	SCREW

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6015-125 OR D6017-115
FINISHED LENGTH = 110.270±0.06
- 2) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2
CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: DART PART NUMBER "D350-748-141" AND BATCH NUMBER ON INSIDE OF CUFF
PER DART QSI 044 6.4 (VIBRATING STYLUS)
- 7) WEIGHT: 30.45 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR Ø0.297 HOLE.
- 9) BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES. MAXIMUM TUBE FLATTENING DUE TO
BENDING IS 6% BASED ON O.D.
- 11) HEAT TREAT TO MIN. 180 KSI PER MIL-T-6736 OR AMS 2759-1C AFTER TURNING. ACCEPTABLE TO
VERIFY TENSILE STRENGTH BY HARDNESS TEST PER ASTM E18 TO 40-45 HRC.
- 12) INSTALL D2856-400-710 ABRASION STRIPS WITH A GAP ON BOTTOM SIDE OF CROSSTUBE,
CENTERED OPPOSITE D3502-1 SUPPORT, PER QSI 035.
- 13) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES,
NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY.
CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE
MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO
CRACKING/CHIPPING/GROOVES.
- 14) TORQUE CLAMPS 60 TO 80 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT
NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.
- 15) MAX TWIST AFTER BENDING: WITH XTUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN
CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.25 (ZN C1-3).

UNDER REVIEW

11.07.12

RELEASED
2011-01-18

F	ADD HRC TEST OPTION (B8-1) PER PAR 09-040, ADD TWIST LIMIT (A8-1, C1-3), ADD D6015-125 OPTION (C8-1), STOCK DIM NOW MACHINED (D1-4)	CP	10.11.23
E	REVISE GENERAL NOTES: UPDATE TO CURRENT ADD STANDARDS; RELOCATED FLAG #6 PER PAR 08-046 (ZN A6-3); TOLERANCES (ZN C6-3, D1-3)	RF	09.09.30
D	MAG. PARTICLE AND CAD PLATE AS MFD.	CP	06.10.31
C	ADD CAD PLATING	CP	06.08.14
B	ADD D6017-115 & PRIME AND PAINT	CP	06.06.30
A	NEW ISSUE	CP	06.03.31
REV.	DESCRIPTION	BY	DATE
DESIGN	92	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	92		
CHECKED	92	DRAWING NO.	REV. F
MFG. APPR.	92	D350-748-141	SHEET 1 OF 4
APPROVED	92	TITLE	SCALE
DE APPR.	92	CROSSTUBE (AS 350/355 HI FWD)	NTS
DATE	10.11.23	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

Dart Aerospace Ltd

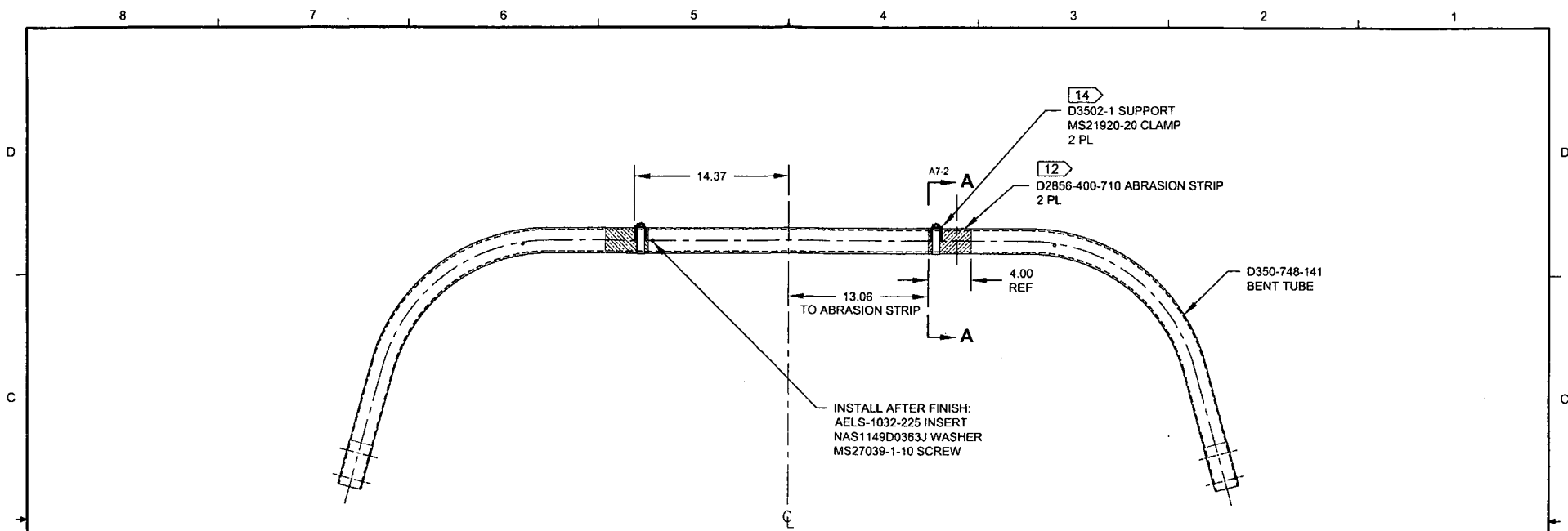
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

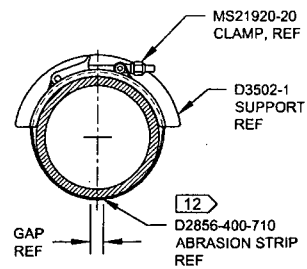
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



**D350-748-141
ASSEMBLY DETAIL**



SECTION A-A D4-2
SCALE 4X

UNDER REVIEW
11.07.11

RELEASED
2011-01-18
M

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D350-748-141	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE (AS 350/355 HI FWD)	NTS
DATE	10.11.23	<small>COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

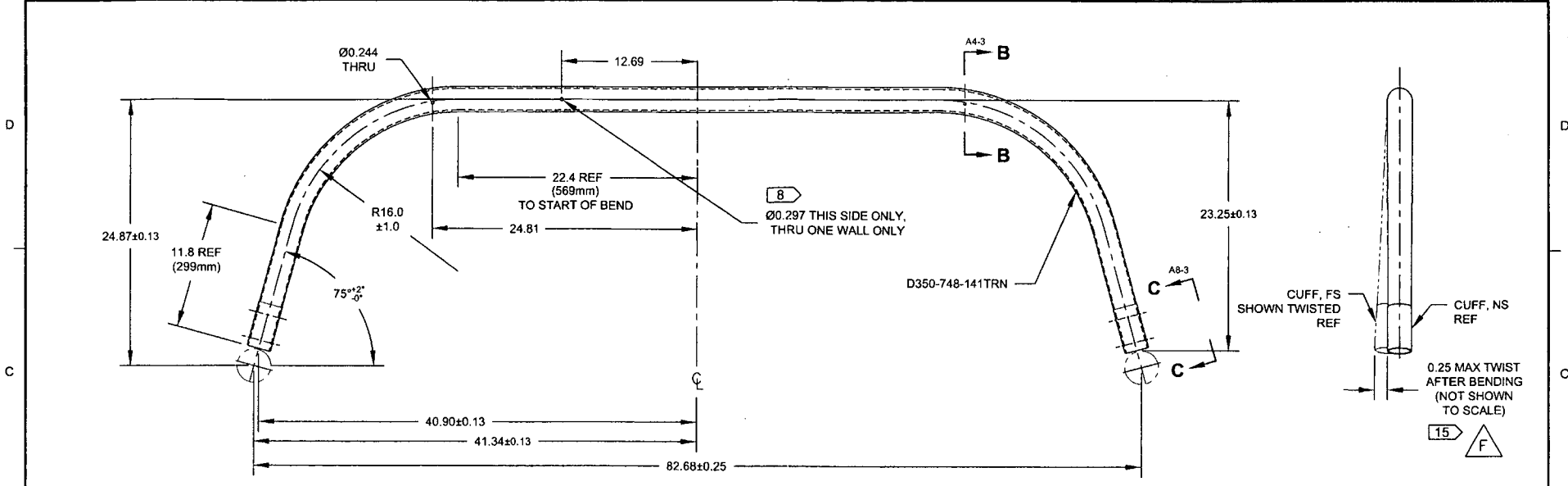
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

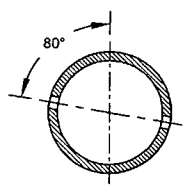
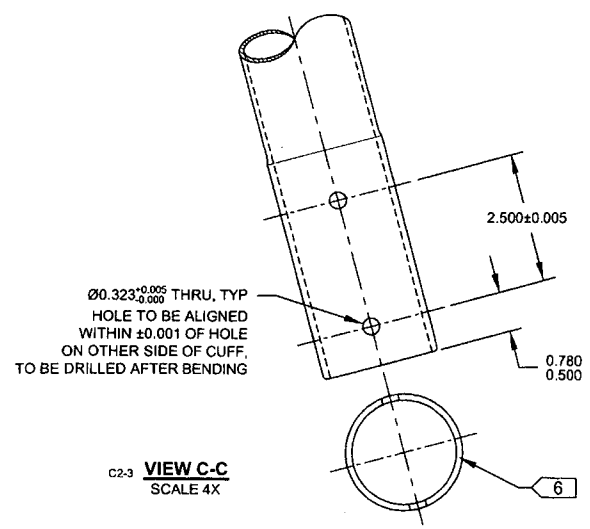
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1



D350-748-141
BENDING AND DRILLING DETAIL 10



UNDER REVIEW
11.27.12

RELEASED
2011-01-18
MD

DESIGN	qp	DART AEROSPACE LTD	
DRAWN	qp	HAWKESBURY, ONTARIO, CANADA	
CHECKED	h	DRAWING NO.	REV. F
MFG. APPR.	h	D350-748-141	SHEET 3 OF 4
APPROVED	h	TITLE	SCALE
DE APPR.	h	CROSSTUBE (AS 350/355 HI FWD)	NTS
DATE	10.11.23	<small>COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

8 7 6 5 4 3 2 1

Dart Aerospace Ltd

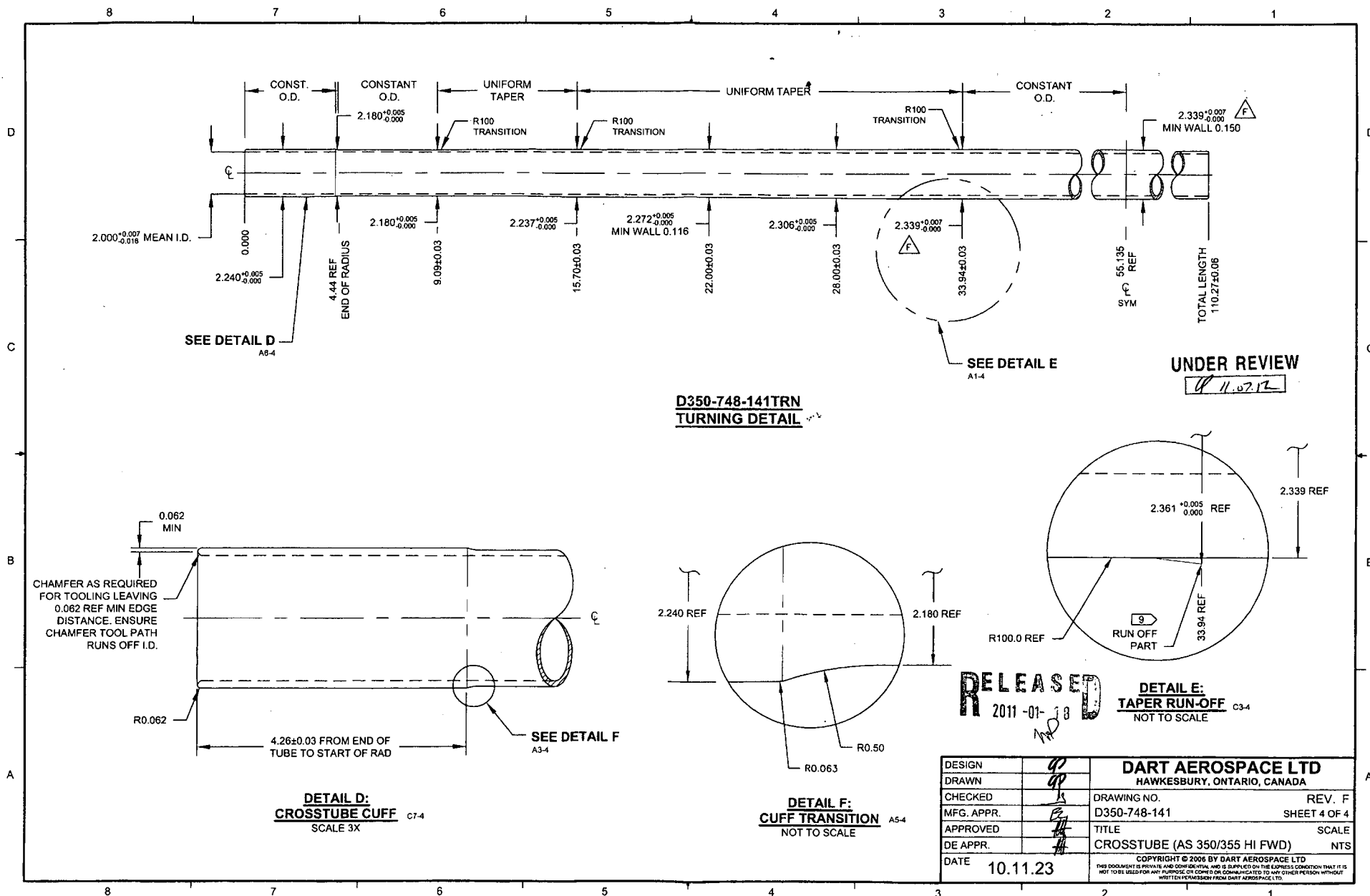
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

CADORATH GROUP NON CONFORMANCE REPORT

CADORATH AEROSPACE ☐

CADORATH DISTRIBUTION ☐

CADORATH COATING ☒

UNIFLYTE ☒

NOTE: THIS FORM MUST BE COMPLETED BY: CUSTOMER ☒ VENDOR ☐ BEFORE PROCESSING OF PART(S)

NCR#: **C1105**

DATE: **08/29/11**

CUSTOMER: ☒ **Dart Aerospace Ltd.**

VENDOR: ☐ **N/A**

PART DESCRIPTION: **Skid (Crosstube)**

CUSTOMER P/O #: **PO 14653**

PART #: **d350-748-101**

SERIAL #: **B72500 and B72501** QUANTITY: **TWO (2)**

PURCHASE ORDER INSTRUCTIONS: **Cadmium Plate**

DISCREPANCY: **These parts failed our MPI test. They were found cracked in the same area as the last time. We have stopped processing the parts and would like to send them back for your evaluation.**

Nick Wasylik (QA Manager)

CADORATH/UNIFLYTE INSPECTION DEPARTMENT

CUSTOMER: ☐

VENDOR: ☐

PLEASE COMPLETE THIS PORTION, SIGN AND RETURN TOP COPY OF THIS FORM TO CADORATH/UNIFLYTE

DATE: **08/29/11** P/O: **PO 14653**

CUSTOMER INSTRUCTIONS: ☐

VENDOR CORRECTIVE ACTION: ☐

ATTENTION: Chantal Lavoie

As per Don Schwartz's email to you, we will return these parts for your evaluation.

AUTHORIZED SIGNATURE

NAME AND TITLE

DATE: 10/13/10

FORM: OPS 097
REVISION: 3